



## The MCS-MAGNUM-MLB-7 Specifications & Description

### Product Specifications

#### Medium Large Box

Dimensions .....	22"w x 28.75"h x 8"d
Mounting Holes .....	Mounts with four pre drilled 15/32" holes
Operating Temperature.....	-40°F to +158°F (-40°C to +70°C)
Storage Temperature.....	-40°F to +158°F (-40°C to +70°C)
Microcontroller .....	Zilog eZ80 Acclaim! @ 50mhz
Sensor Inputs (SI).....	12 inputs 0-5vdc (10-bit A/D)
Digital Inputs .....	4 inputs 0 or 5vdc only
Relay Outputs (RO) .....	10 outputs 6.3amps @ 230vac
Analog Outputs (AO).....	4 outputs 0-10vdc
Printed Circuit Board.....	Six layer with separate power and ground planes
Input Power (Standard) ....	115 or 230vac ±10% 50/60Hz @ 77°F (25°C) ambient, 20VA max (Voltage is field selectable)
Current Draw .....	200mA @ 115VAC 100mA @ 230VAC
MCS-I/O Com Port.....	1 @ 38,400 baud
RS-485 Com Port .....	1 @ 19,200 baud
Ethernet .....	10/100 Mbps Ethernet
Real Time Clock .....	Battery backup
Power Detection .....	Automatic power fail reset
Ethernet Port: .....	10/100 Base-T port.

#### Touch Screen 7

Dimensions .....	9.35"L x 7.125"Wx2.881"H
Gasket Material.....	HT-800 Medium Cellular Silicone NEMA 4
LCD Screen .....	7.0" (16:10 Diagonal) 262,000 Colors 1280x800 Resolution View Angle 80° x 80° x 80° x 80° (Up, Down, Left, Right) 4-Wire resistive touch w/Stylus pen White LED Backlight (Min Life 10,000 Hrs) Luminance Min. 300 cd/m²
Surface Treatment....	Glare/Anti-Reflection ≤1.5% Hard Coating (3H)
Environment Limits ....	-20°C to 70°C Operating Temp. -30°C to 80°C Storage Temp. 0 to 95% Humidity; Non-Cond.
Power Input.....	12Vdc 2 amps
Motherboard .....	Freescale i.MX6 Solo 800mhz 1Gb of 512mhz DDR3 RAM Mem. 4Gb of eMMC Flash memory 1Gb Ethernet (100Mb/10Mb comp.) 1 Micro-SD Slots 1 USB On-The-Go (OTG) 2 USB Host 2.0 Real Time Clock (RTC) w/ Battery LVDS for 7" LCD w/ 4-wire resistive touch screen 3 RS485 communication ports (max. baud rate 115k)

### Product Description

The **MCS-MAGNUM-MLB-7** consists of a MCS-MAGNUM along with a Touchscreen 7" display. The MCS-TOUCH-7 is a new touchscreen interface designed to simplify user access with the MCS-Magnum utilizing MCS-Connect to provide both graphics and service mode access for technicians. Information and graphics on the MCS-TOUCH-7 are shown on a 7" high resolution (1280x800) LCD display with LED backlighting, which will guarantee long-life operation.

The MCS-TOUCH-7 makes it easy for the user to manage more complex installation diagrams, without losing the overall view of the installation, as well as ensuring that the pages can be browsed in a fast and straight forward manner.



#### Part # MCS-MAGNUM-MLB-7

The **MCS-MAGNUM** is a durable microprocessor based controller designed for the hostile environments in the HVAC/R industry. It is designed to be the primary manager of the package it is controlling. The Magnum provides flexibility with setpoints and control options that can be selected prior to commissioning a system or when the unit is live and functioning. Displays, alarms and other interfaces are accomplished in a clear and simple language that informs the user as to the status of the controller.

Complementing the Magnum micro controller are a variety of MCS expansion boards that allow for system expansion to a maximum of 112 inputs and 80 outputs. Communication to these units occur at 38,400 baud over the MCS-I/O port which is dedicated for this purpose.

### Options

-MB-WIRELESS-3G .....	Cellular Modem with 1 yr subscrip.
-MB-RO10-(24/115/230) .....	10 relay output expansion board
-MB-SI16-AO4-(24/115/230).....	16 sensor input expansion board
-MB-24VOLT-(115/230) .....	115(230) to 24vac transformer
-MB-WARNING-(24/115/230) .....	Yellow warning indicator
-MB-ALARM-(24/115/230) .....	Red alarm indicator
-MB-RUN-LT#(1/2/3/4) .....	Green run indicator
-MB-RUN-SW .....	Run/Stop selector switch
-MB-EMERG-SW .....	Emergency Stop switch
-MB-COMP#(1/2/3/4) .....	Single compressor on/off switch
-MB-BYPASS .....	Momentary bypass push button
-MB-ETHERNET .....	Industrial rated RS-232/Ethernet device
-MB-ETHERNET-SW .....	Ethernet switch and power supply
-MB-CARRIER-5K-ADAPTER .....	Resistor adapter that converts the Carrier motor winding Temp.
-MB-PT-ADAPTER .....	Resistor adapter that converts the Hanbell motor winding Temp.
-MB-BMS-GATEWAY .....	BacNet IP to MSTP/Lontalk
-MB-EXV-DRIVER-xx .....	Control board for EXVs